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FEE TRANSMITTAL

Application Number 09/868,831
Filing Date November 29, 2001
Confirmation No. 6440
Inventor(s) Nicholas J. Welton, et al.
Group Art Unit 1711
Examiner Name Umakant K. Rajguru
Attorney Docket Number HBF 5560

METHOD OF PAYMENT

1. [ ] The Commissioner is hereby authorized to charge the indicated fees to Deposit Account No. 19-1345.

   [ ] The Commissioner is hereby authorized to charge any additional fees required under 37 CFR 1.16 and 1.17 to Deposit Account No. 19-1345.

   [ ] Applicant claims small entity status.

2. [X] Check Enclosed. The Commissioner is hereby authorized to charge any under payment or credit any over payment to Deposit Account No. 19-1345.

FEE CALCULATION

1. [ ] BASIC FILING FEE Subtotal (1) $_____
   (Type: _____)

2. [ ] EXTRA CLAIM FEES Subtotal (2) $_____

   Total Claims _____
   Independent Claims _____
   Multiple Dependent Claims _____

3. [X] ADDITIONAL FEES Subtotal (3) $ 110.00

   [ ] Surcharge - late filing fee or oath
   [ ] Surcharge - late provisional filing fee or cover sheet
   [X] Extension for reply within first month
   [ ] Notice of Appeal
   [ ] Filing a Brief in Support of an appeal
   [ ] Request for ex parte Reexamination
   [ ] Petitions to the Commissioner
   [ ] Submission of Information Disclosure Statement
   [ ] Recording each patent assignment per property
   [ ] Request for Continued Examination
   [ ] Other: _____

TOTAL AMOUNT OF PAYMENT $ 110.00

Vincent M. Keil

Vincent M. Keil, Reg. No. 36,838 June 17, 2003
Date

VMK/sxm

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Welton, et al. Art Unit 1711
Serial No. 09/868,831
Filed November 29, 2001
Confirmation No. 6440
For CAPSTOCK POLYMER COMPOSITION
Examiner Umakant K. Rajguru

July 17, 2003

REQUEST FOR RECONSIDERATION

TO THE ASSISTANT COMMISSIONER FOR PATENTS,

SIR:

Applicants request reconsideration of the final Office action dated March 18, 2003.

The Examiner's courteous telephone interview with the undersigned attorney on June 13, 2003 is appreciated.

Claims 1, 2, 5 and 7-11 stand rejected under 35 U.S.C. §103(a) as unpatentable over the disclosure in U.S. Patent No. 5,322,899 (Grunewalder et al.) in view of (a) JP 54034359 (JP `359) or U.S. Patent No. 4,129,535 (Elcik) and (b) U.S. Patent No. 4,965,309 (Batdorf) or Elcik. Claim 6 stands rejected as unpatentable over Grunewalder et al. in view of JP `359 or Elcik and (b) Batdorf or Elcik, in further view of U.S. Patent No. 4,032,498 (Dany et al.) or U.S. Patent No. 5,200,446 (Bergner).

Claim 1 is directed to a polymer composition comprising a blend of (a) a melt extrudable acrylic polymer component comprising more than 50% by weight, based on the weight of the acrylic polymer component, of a high molecular weight acrylic

polymer having a molecular weight of from about 150,000 to about 350,000 and up to 50% by weight, based on the weight of the acrylic polymer component, of a low molecular weight acrylic polymer having a molecular weight of from about 10,000 to about 100,000; (b) from 10% to 50% by weight of a halogen donor component, such as polyvinyl chloride; (c) an effective amount of a halogen volatilisation agent; and (d) a char-inducing component.

In order to establish a *prima facie* case of obviousness, the Patent Office must establish, among other things, that the prior art teaches or suggests all of the claim limitations.

As discussed with the Examiner in the above-mentioned telephone interview, none of the cited references disclose a melt extrudable acrylic polymer component comprising a high molecular weight acrylic polymer having a molecular weight of from about 150,000 to about 350,000 and a low molecular weight acrylic polymer having a molecular weight of from about 10,000 to about 100,000 as called for in claim 1. Although Grunewalder et al. disclose a capstock polymer composition including a halogen donor component and an acrylic polymer component comprising two different acrylic polymers, the primary reference fails to teach or suggest the melt extrudable acrylic polymer component satisfying the molecular weight requirements recited in claim 1. Instead, all that Grunewalder et al. teach is that the acrylic polymer component include a first acrylic polymer which is the polymerization product of monomers whose major constituent is methyl methacrylate and a second acrylic polymer which is the polymerization product of monomers whose major constituent is ethyl methacrylate. Grunewalder et al. are silent as to the molecular weights of the two acrylic polymers. Moreover, since

there is no description of the specific acrylic polymer compositions (i.e., the other monomers or polymers present with the methyl methacrylate and ethyl methacrylate monomers in amounts less than 50% by weight of the resin solids - see the paragraph of Grunewalder et al. bridging columns 3 and 4), one of ordinary skill in the art would not be able to discern or even approximate the likely molecular weights of the two acrylic polymers.

At the request of the Examiner, Applicants have now obtained information regarding the molecular weights of the acrylic polymers identified by Grunewalder et al.

In Example 1 of Grunewalder et al., a fluoropolymer-acrylic polymer blend including 55.2% by weight fluoropolymer, 18.4% by weight **PLEXIGLAS®-VS 100** acrylic polymer, 18.4% by weight **ACRYLOID® B72** acrylic polymer, 7% by weight pigments, and 1% by
* weight lubricant is disclosed. Attached is a copy of a letter from Atoglas, a European supplier of acrylic resins, which confirms that the average molecular weight of their product ALTUGLAS® VS100 is 72,000. ALTUGLAS® VS100 and PLEXIGLAS®-VS 100 are the same material, the difference being that the PLEXIGLAS name is used in the United States and the ALTUGLAS name is used
* in Europe. Also attached is a copy of manufacturer's information entitled PARALOID® Acrylic Resins Thermoplastics. PARALOID® is the trade name under which ACRYLOID® acrylic resins are marketed in Europe. According to this information, ACRYLOID® B72 (i.e., PARALOID® B-72) has a molecular weight of 105,000. Thus, neither of the acrylic polymers utilized in Example 1 of Grunewalder et al. constitute a high molecular weight acrylic polymer having a molecular weight of from about 150,000 to about 350,000 as called for in claim 1.

The only other acrylic polymer identified by name by Grunewalder et al. is ACRYLOID® B44 at col. 3, line 45. The PARALOID® Acrylic Resin literature submitted herewith discloses that the molecular weight of ACRYLOID® B44 (i.e., PARALOID® B-44) is 140,000, outside the range of the high molecular weight acrylic polymer defined in claim 1. Moreover, Grunewalder, et al. teach that the melt viscosity properties of ACRYLOID® B44 render it unsuitable for the blending process with a fluoropolymer as disclosed therein (See col. 3, lines 49-51) and do not disclose the combination of ACRYLOID® B44 with another acrylic polymer.

Accordingly, in view of the above, Grunewalder et al. fail to teach or suggest the claimed acrylic polymer component of a capstock polymer composition which includes a high molecular weight acrylic polymer having a molecular weight of from about 150,000 to about 350,000 combined with a low molecular weight acrylic polymer having a molecular weight of from about 10,000 to about 100,000.

As discussed in Amendment B filed December 13, 2002, the shortcomings of Grunewalder et al. cannot be overcome by resort to any of the secondary references relied on in the Office action. In the absence of any teaching or suggestion of a capstock polymer composition including an acrylic polymer component as called for in claim 1, Applicants respectfully submit that the references upon which the Examiner relies cannot establish a *prima facie* case of obviousness. Accordingly, claim 1 and dependent claims 2 and 5-11 are submitted as patentable over the references relied on in the Office action.

In view of the above, favorable reconsideration and allowance of all pending claims are respectfully solicited. In

order expedite allowance of this application, the Examiner is invited to contact the undersigned attorney to discuss any remaining issues.

Applicants request an extension of time to and including July 18, 2003 for filing a response to the above-mentioned Office action. A check in payment of the applicable extension
* fee is enclosed.

The Commissioner is requested to charge any fee deficiency or overpayment in connection with this amendment to Deposit Account 19-1345.

Respectfully submitted,

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SENNIGER, POWERS, LEAVITT & ROEDEL
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St. Louis, Missouri 63102
(314) 231-5400

VMK/sxm
*Attachments/Enclosures

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ATOGLAS

SDA

From: Patrick DELPRAT
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E-mail : patrick.delprat@atofina.com

Ref: SDA/PD/001081.doc

MONT, June 20th, 2003

TO: M. M. Reynolds

COPY : Ms A. Rouvière- C. Casielles- M. J. Teixeira Pires

Subject:	**Molecular weight of Altuglas® Acrylic resin VS-UVT, VS100, DRT, HFI10 (H.S. C-063)**

Dear Mick,

The average values of molecular weights of our product Altuglas® VS-UVT, VS100, DRT and HFI10 are respectively:
74600, 72000, 94000, 85000.

If you have any questions or require additional information, please contact me at + 33 5 59 65 53 91.

Regards,

Patrick DELPRAT

Resins - Europe
Development Team

CRYI

PARALOID® Acrylic Resins

Thermoplastics

PRODUCT NAME	APPLICATION NOTES	RESIN PROPERTIES				PRODUCT AS SUPPLIED			
		Tg (°C)	BASE COMPO-SITION	SOLUBILITY PARAMETER	MOLECULAR WEIGHT (Mw)	ACID NUMBER (calculated)	SOLVENT RATIO	DENSITY (grm/ml)	VISCOSITY (cP)
GENERAL THERMOPLASTICS									
A-11 100%	Hard resin: resistant to water & alcohol	100	MMA	9.4	125,000	2-3	-	1.18	
A-12 100%	Lower cost than A11, supplied in pellets	91	MMA	9.4	90,000		-	1.18	
A-101 40%	Hard resin: exterior durability & resistance properties	105	MMA	9.4	100,000	3-4	MEK	0.94	5,000
B-38 100%	Completely soluble in either white spirit or isopropanol	50	IBMA	8.6	60,000	3-4	-	1.04	
B-60 100%	Fast dry; adhesion to plastics	75	MMA/BMA	9.2	50,000	3-4		1.13	
B-64, 100%	General purpose, concrete & exterior durability	58	MMA/EA	9.8	140,000		-	1.12	
B-66 100%	General purpose; fast solvent release	50	MMA/BMA	9.0	70,000	3-4	-	0.86	
B-72 100%	Compatible with various resin types; soft resin	40	EMA cop.	9.3	105,000	3-4	-	1.15	
B-82 100%	General purpose; chemical resistant; softest resin	35	MMA/EA	9.4	120,000	3-4	-	1.16	
THERMOPLASTICS WITH ENHANCED ADHESION									
A-21 100%	Hardest resin; Improved intercoat adhesion	105	MMA	9.4	120,000	3-4	-	1.18	
B-44 100%	Excellent adhesion to various treated substrates; PVDF coatings.	60	MMA/EA	9.8	140,000	1-2	-	1.18	
B-48N 100%	Unique hardness vs. flexibility; adhesion to untreated metals	50	MMA/BA	9.3	250,000	10-12	-	1.15	
B-84 45%	Unique airdry adhesion to problem surfaces	50	MMA/BA	9.3	80,000	10-12	Tol/sBuOH, 85/15	0.97	5,000
ALKYD MODIFIERS, DISPERSANTS									
B-67 100% B-67MT 45%	Medium & long oil alkyd modifier; most water resistant; Gen. purpose thermoplastic. Soluble in mild solvents	50	IBMA	8.6	60,000 30,000	3-4	- MT	1.04 0.88	1,200
B-99N 100% B-99 50%	Improves gloss of other resins; short & medium oil alkyd compatible; pigment dispersant	82	MMA/BMA	9.4	15,000	3-4	- Xyl/Tol, 70/30	1.15 1.01	3,000
DM-55 100%	Excellent pigment dispersant, UV varnishes	70	MMA cop.	9.4	6,000	3-4	-	1.07	
NAD10V 40%	Non-aqueous dispersion; fluorescent pigments	40	IBMA		130,000		VMP-N	0.85	500
F-10 40%	Aliphatic hydrocarbon soluble; fluorescent pigments	20	BMA	8.8	150,000	1-2	MT/A150, 87/13	0.89	2,100

Solvents: Tol = toluene, Xyl = xylene, PMAc = PM Acetate, BuOH = butanol, MEK = methyl ethyl ketone, sBuOH = sec-butanol, VMP-N = VM&P Naptha, A150 = Aromatic 150, MT = Mineral thinner